

# CATS



# NEWSLETTER

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The Official Journal of the Capital Area Timex/Sinclair Users Group

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## Presidential Ramblings

This will be a short ramble - I am past Tim's deadline already.

Our October meeting was excellent, primarily because Herb Schaaf went first on the demo of the disk cataloging program. I didn't have time to get my part of it in. He had visuals, on screen, actual demonstration of the program, and finally a show of how the Archive database that was developed from it would work. My demo will follow in a couple of months - maybe I can get things in better shape by then.

Our picnic attracted a core of CATS members who all had a great time. We ate and drank and sailed and fished and traded. We all left with a hearty thanks to Bob and Betty Diggs for their unsurpassed hospitality. We also auctioned off a bunch of stuff, especially the stock of goodies from Vernon Smith's and Tom Bent's attic. Tape recorders were hot, George Rey got one for 25 cents - his fish bait cost more than that!

We also brought the remainder of Tom Bent's items to the October meeting. Mostly, these were QL motherboards, with chips, and some other IC's and sockets. One item generated quite a bit of interest - a little box with a 9 pin serial connector (nobody at the picnic knew what it was for). Tim Swenson plugged it into the serial port on a QL, opened a channel to the port, and got it to talk! He just entered: "print #3, 'Hello'" and exactly that came from the speaker. See Tim for a demo - he bought the item.

One last time for this batch of Tom's stuff - come to the Nov. meeting for an auction. On the telephone today he said that he has more! If anyone is interested in getting anything, get in touch with him - you will have to pick it up.

Mannie Quintero presented a way to get a Gold Card for \$240 (including shipping) - you need to call England direct with a credit card number and the name of the organizer (a QL'er in Florida). Contact Mannie for details. He also can tell you how to get the keyboard interface on a similar deal.

Next month Joe Miller will present a program on the latest, newest hardware for the 2068. Come and see! We are scheduled to meet in New Carrollton with workshop at 11 A. M. and meeting at 1:30 P. M. For December, Hank Dickson will set-up our Holiday Celebration - he will need help, give him a hand and your ideas.

Our Northern Get-together will be at the Linthicum Library on November 16th (starting at noon). We need ideas for that session! Bring your suggestions to the November meeting. What are you dying to know about your computer?

Lastly, and most important, congratulations to our esteemed Editor, he is now the father of a baby girl.

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## Key Dates

- 2 November: CATS Meeting  
11:00 Workshop  
1:30 Executive Board Meeting  
2:00 General Meeting
- 18 November: Newsletter Deadline  
For the Next Issue
- 7 December: CATS Meeting

## Next Meeting:

Joe Miller will present a program on the latest, newest hardware for the 2068.

## From The Editor:

This issue is a bit bigger than the last couple of issues. The trickle of articles is picking up. Actually, the articles by Herb Schaaf were given to me a few months ago (along with two others) and I forgot about them until Herb mentioned them to me at the last meeting.

Now if we can just keep the articles coming we'll be doing all right. I know a lot of you are using your computers, but no one is letting us know about their activities via the newsletter.

The biggest news this month is the addition of two "associate" CATS members. The Acord family had an addition of a baby girl on 12 Sept. Her name is Kaleigh Elizibeth, 7 lbs 10 oz, and 19" long. My wife and I are also the proud parents of a baby girl. She is Caitlan Anne, born 27 Sept, 5 lbs 2 oz, and 19 1/2" long. Both mothers and babies are doing well.

That's about all I have for the moment. See you at the next meeting.

Happy Hacking,

Tim

# Micro-Torque Wrench

*By Herb Schaaf*

I'd been having troubles with a 3.5" disk drive. I had eliminated some obvious faults, such as the rubbing of the spinning parts against the table top, and whether the connectors were in upside down.

I began to suspect loose connections, since it would work sometimes, but not always. Having it on the workbench running upside down, I noticed 'erratic' or even stalling out of the spin motor !

Then I checked the floppy disk itself. Yes indeed, it was harder to turn by hand than some others. Ah-ha! it is the combination of a weak drive and a floppy disk with higher than usual rotational friction! This explains why the disks would work on other drives!

How to measure the torque on a floppy disk? I put an ammeter in the 12 volt line to see if there was a difference between good and bad disks, and good and bad drives. Sure enough there was.

Then I thought; how about a 'torque wrench' for checking disks? I bent some wire until I had one, and used it to make some crude measurements. My borderline disk needed 75 cm-gms to turn, while good ones only took 20 or so. Some really bad ones took 100 cm-gms to turn them.

OK, you know me, I took the borderline floppy apart to see what I could see. Inside was a piece of plastic pressing against the liner, and this makes a snubber or pressure pad, presumably to help the liner wipe the disk clean. I removed the plastic pressure plate, put the floppy back together, and it now works with less than 10 cm-gms torque.

I checked other disks to see if they were hard to turn; I did find a few more. All were from a

'white-box' low-price special that I got at a ham-fest. I'm glad I only got 2 boxes (20) of them.

If you want to check a 3.5" floppy, an easy check is to hold it horizontally in the palm of your hand and shake it gently while you look at the hub. It should slide around and rattle a bit. The hard-to-turn disk will not respond unless you shake it vigorously.

A micro-torque wrench gives a measure not based on judgement, and reveals other interesting properties of stiction and friction.

## Dayton Computerfest

*By Ruth Fegley*

### Ruth's Point of View

For me, there's always something very special about meeting face to face with the Sinclair faithfuls. So for the 6th time I sat at the CATS' table to share computer successes and frustrations with other Sinclair devotees. Each gathering becomes smaller, but no less enthusiastic.

Old friends from Milwaukee, Chicago, Indiana and Dayton User Groups were there along with Carol and Frank Davis of UPDATE fame and Paul Holmgren who has taken over from Tom Bent as far as handling various hardware "goodies" and representing QUANTA is concerned. Don Lambert was there as proof that TSNUG is alive and well.

A new face (to me, at least) was Keith Watson, a 2068 enthusiast, who demonstrated his updated eeprom for the AERCO FD-68. I'm certainly not a technical expert, but my impression is that now the AERCO system will have all the bells and whistles attributed to the Larken DOS for a very inexpensive investment. Write Keith for details at 41634 Amberly Drive, Mt. Clemens MI 48044 or call 313/286-9049.

We sold some QL stuff for Sharp's, and Mark gave CATS a contribution for our efforts. It was a good chance to pick up back issues of QL WORLD as well as several QL books. (He still has copies of Jan Jones' QL SuperBASIC - THE DEFINITIVE HANDBOOK. I noted that one of the columnists in QL WORLD was recently decrying the fact that it was no longer available in the UK for the many still requesting it. Maybe you'd better buy one of your own from Mark!)

Both Frank and Paul had some items of interest for sale. Frank attracted a lot of attention by demonstrating the new GOLD CARD. Bob Swoger (CATUG) demonstrated 2068 goodies such as LogiCall, their super enhancement for the Larken interface. And, of course, the informal exchanges in motel room gatherings and/or while tying up one whole section of a Ponderosa dining room after Saturday's dinner provided "icing on the cake" factors in my assessment of the value of being there.

: Guess that's enough to give you an idea of what you missed. (My apology to those whom I may have forgotten to mention.) Consider joining us at Dayton next year!!!

## **ZX-81 10th Anniversary**

*By Tim Swenson*

Last month at the Federal Computer Conference, they had a key-note address on the 10th anniversary of the IBM PC. On a big screen monitor they played those old IBM Charlie Chaplin advertisements.

This started me thinking and it dawned on me that this year was the 10th anniversary of the Sinclair ZX-81. The ZX-81 was introduced in England on March 1981 and introduced to the U.S. at a press conference in Boston on Oct. 7, 1981.

I first saw mention of the ZX-81 in an issue of Popular Science. They had a short blurb on the ZX-81 when it was intro'd in England. Later I saw an add for the ZX-81 in

the October issue of Popular Science. At that time I was looking at the various computers on the market. I was leaning toward the VIC-20 which cost \$400. When I saw that the ZX-81 would cost me \$250, including 16K, I quickly rushed off a check to Sinclair.

I recieved my ZX-81 the day before Thanksgiving. When my Step-Father first saw it he said "You paid \$250 for that?" Indeed it did look small. I spend most of Thanksgiving hooking it up to the TV and trying it out.

My first attempts on the ZX-81 were not too successfull. For some strange reason I could not load any programs that I had saved. I could hear the sound of the programs, but they would not load. I finally fixed the problem when I discovered that you had to push both the play and record buttons on the tape player. I had been pushing record only, just like the tape player on my stereo.

Since I was new to programming I picked up David Ahl's two books "101 Computer Games" and "More Computer Games." Just reading the programs helped me learn BASIC.

After I found out about Sync Magazine, I subscribed to it and it very informative and provided even more programs to learn off of.

The ZX-81 is a great computer to learn on. Its whole operation is fairly simple. After I learned BASIC, I started playing with some of the internals of the computer. I found a few system variables that could be used for a few tricks.

I then moved on to assembly language. Toni Baker's book on machine code helped me get over the hurdle. Since the ZX-81 is so simple, writing assembly programs were fairly easy. With other computers you must work with the operating system, but on the ZX-81 you have total control of the computer.

I picked up a copy of the ZX-81 ROM disassembly and found a few ROM calls that I could use to save writing my own code. If I ever get back into assembly programming, I will probably bring my ZX-81 (or T/S 1000) out of retirement. It really was fun to hack on.

One of the neatest programs that I saw for the ZX-81 was called AUDSEY by Ron LeMon, published in Sync. It was a machine code routine that would sample and store sounds from the cassette port. After storing a few seconds of sound the program could play back the sound. In a way it worked like a sound digitizer. Very creative use of the cassette port. I still have the issue of Sync if anybody is interested.

I like programming on the ZX-81 because the display quality was limited. The better the screen display the more work you have to put into the physical presentation of the program. It would only take minutes to work out a fairly good looking ZX-81 screen, but on the QL, it can take hours to get everything right.

I have many fond memories of spending hours sitting at the keyboard of my ZX-81 (so much that I wore the keyboard out). The ZX-81 was designed to be a learning tool. Simple to build and program. It achieved that goal remarkably. It is simple enough for students to know in and out of the computer, from the low level hardware all the way to programming it.

In another 6 to 10 years I plan to introduce my new daughter to computers thought the ZX-81. It was my first and I want it to be her first. I hope she finds computers as fascinating as I do.

## Messing With Headers

*By Herb Schaaf*

With ToolKit 2 and some other utilities it is possible to read from and write to selected parts of a floppy disk. Based on that I wrote 3 short programs in SuperBasic:

### 1 - RELABEL

This lets you rename the disk if you want to (or name it in case you formatted it without naming it).

### 2 - NOTRANDOM

This allows you to put a specific i.d. number on the disk instead of the one assigned at random by QDOS. QDOS uses this to see if the disk has been changed, so use different numbers for different disks.

### 3 - HEADROOM

QDOS reserved 20 bytes in the disk header for some as yet unknown (to me) purpose. All the disks I've looked at have this filled with 255, but if you can find a use for the space, it is there to be used. If you are aware of a use of this space, or any reason we should keep out of it, please let me know!

All of these programs read from the disk header on side 0, track 0, sector 1. They display the current contents, and default to make no changes. To make a change, just follow the prompts.

Practice first on some 'scratch' disks and make a backup of disks [BEFORE] you use these routines on them, just in case. After all we are messing around with the disk's HEAD(er).

```
=====
R E L A B E L
=====
```

```
100 REMark relabel
110 TK2_EXT
```

```

120 REMark in case you want to
change Formatted Name of disk
130 OPEN #3,'flp1_*d2d'
140 GET #3 \ 1, a$
150 CLOSE #3
160 CLS
170 labels$a$( 5 TO 14)
180 PRINT labels$
185 PRINT "\\ " # " , "CHR$", "dec"
,"HEX"\\
190 FOR i = 1 TO 10
200 PRINT " ";i," ";labels$(i),"
";CODE(labels$(i)),HEX$(CODE(labels$-
(i)),8)
210 END FOR i
220 DIM relabel$(10)
230 CLS#0
240 PRINT #0,"touch ENTER to keep
present name"
245 PRINT \\
250 INPUT"Change name to ? (up to
10 chr$)"\relabel$
260 IF relabel$="" THEN relabel$
=relabel$
270 CLS #0
280 PRINT relabel$
290 a$(5 TO 14)=relabel$
300 OPEN #3,'flp1_*d2d'
310 PUT #3 \ 1, a$
320 CLOSE #3

```

```

=====
N O T R A N D O M
=====

```

```

100 REMark notrandom
110 TK2_EXT
120 REMark uses 'random' disk
header bytes
130 WTV
140 CLS
150 OPEN #3,'flp1_*d2d'
160 GET #3 \ 1, a$
170 CLOSE #3
180 CLS
190 PRINT a$(1 TO 16)\\ "CHR$"
,"LSB","MSB","HEX$","decimal"\\
200 DIM random$(2)
210 random$a$( 15 TO 16)
220 PRINT random$,CODE (random$
(1)),CODE(random$(2)),
230 diskid = 256*CODE(random$
(2))+CODE(random$(1))
240 PRINT HEX$(diskid,16),
250 PRINT diskid
260 CLS#0 :PRINT #0,"ENTER to
keep default value of ";diskid
270 REPEAT diskidtag
280 PRINT "\"You may wish to

```

```

assign a unique identification
number to this disk"\"try not to
use any identification number more
than once"\\
290 INPUT"Positive Decimal
Integer for this disk ( 1 to 65535
) ? ";notrnd$
300 IF notrnd$="" THEN notrnd =
diskid :EXIT diskidtag
310 notrnd = INT(notrnd$)
320 IF notrnd > 0 AND notrnd <
65536 : EXIT diskidtag
330 END REPEAT diskidtag
340 PRINT\\ notrnd
350 PRINT #0,notrnd$
360 high = INT(notrnd/256)
370 PRINT "high=";high,
380 low = notrnd-256*high
390 PRINT "low=";low,
400 a$(15 TO 16) = CHR$(low)
&CHR$(high)
410 PRINT\ a$(15 TO 16)
420 PRINT\\ a$(1 TO 16)
430 OPEN #3,'flp1_*d2d'
440 PUT #3 \ 1, a$
450 CLOSE #3
460 PRINT\ 256*CODE(a$(16))
+CODE(a$(15))
470 CLS#0

```

```

=====
H E A D R O O M
=====

```

```

100 REMark headroom
105 TK2_EXT
110 REMark uses 'spare' disk
header bytes
120 OPEN #3,'flp1_*d2d'
130 GET #3 \ 1, a$
140 CLOSE #3
150 spares$a$( 77 TO 96)
160 PRINT spares$
180 FOR i = 1 TO 20
190 PRINT spares$(i),CODE(spares
(i))
200 END FOR i
210 DIM insert$(20)
220 INPUT"Your message here...
(up to 20 chr$)"\insert$
230 PRINT insert$
240 a$(77 TO 96)=insert$
250 IF insert$="" THEN a$(77 TO
96)=spares$
260 OPEN #3,'flp1_*d2d'
270 PUT #3 \ 1, a$
280 CLOSE #3
290 DIR

```

You've heard of PROFILE 2068.  
You may have even heard of PROFILE +3!  
But we are willing to bet that you have never heard of:

### **PROFILE +5!**

That's right! PROFILE +5! A great new addition to the line of PROFILE updates. We have used all of the various versions of this program and can honestly say that this is the ULTIMATE PROFILE!

+5 contains all of the features of PROFILE 2068 and +3 as well as all of the new features of TOM WOODS' PROFILE CARTRIDGE! Including the 'NOT' and 'OR' search routines. It also lets you print in 80 columns! It still has the 'NAME REVERSAL' print feature and the 'EDIT A PHRASE' menu option. You can now 'MERGE' files, 'DATE' files and make use of the great machine code sort routine!

All of this is available in several ways, if you already own one or more versions of PROFILE, you will be able to save some money on this version. the complete program on cassette available for:

**ONLY \$29.95+2ph**

(User Manual available only from TOM WOODS for \$10.00)  
For more information, please call or write:

**AVAILABLE EXCLUSIVELY FROM:**

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1419 1/2 7TH STREET  
OREGON CITY, OR 97045  
503/655-7484

## **For Sale**

**Large list of T/S 1000 & T/S 2068  
Books, Software and Hardware  
Send Large Self Addressed  
Stamped Envelope to:**

**William J. Vold**  
6015 Carter Ave.  
Baltimore, MD 21214

**or Call  
(301) 254-8258**

CATS maintains a gratis exchange of newsletters with approximately 30 Users Groups across the U.S. and Canada. Groups not sending a newsletter to us for six months are automatically taken off the list.

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### Executive Board

The Capital Area Timex/Sinclair Users Group is a not-for-profit group devoted to serving the interests of those who own, use, or are interested in the Timex/Sinclair family of computers.

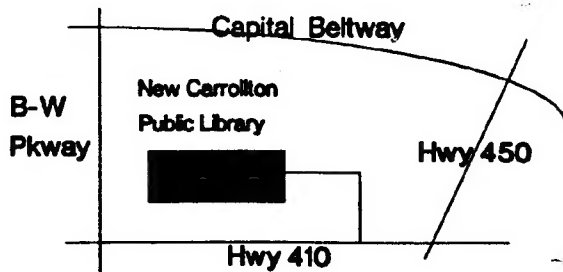
Meetings  
Monthly meetings are held from 11:00 AM to 4:30 PM, on the second Saturday of each month, at the New Carrollton Public Library.  
Newsletters  
Memberships cost \$15 per year, are good for 12 months, and include all privileges (access to libraries, group buys, etc.). A newsletter only subscription is available for persons living outside the Washington Metro area and is \$12 per year.  
Networks  
Time SIG on CompuServe: Wednesday night, 10:00 PM Eastern time (GO CLUB).

CATS Newsletter  
P.O. Box 11017  
Takoma Park, MD 20913

**FIRST**



**CLASS**



The next meeting of CATS will be held on: November 2, 1991

11:00 AM Hardware Workshop  
2:00 PM General Meeting

At: New Carrollton Public Library 7414 Riverdale Road (Hwy 410), New Carrollton, MD

**IF YOU ARE NOT A MEMBER OF CATS. THIS IS THE ONLY ISSUE YOU WILL RECEIVE**